

**510 (K) Summary of Safety and Effectiveness**

DEC - 3 2010

This summary of 510k safety and effectiveness is being submitted in according with 21CFR part 807.92

**Submitter:** Edan Instruments, Inc  
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**Contact person:** Yue Qiuhong (Tracy)  
Edan Instruments, Inc.

**Date:** 2010-9-20

**Proprietary Name:** PC ECG

**Classification Name:** 21 CFR 870.2340 Electrocardiograph

**Product code:** DPS

**Predicate Devices:** Cardiosoft/case cardiac testing system K031561  
Manufacturer: GE medical systems information technologies  
PC ECG, MODEL SE-1010 K092010  
Manufacturer: Edan Instruments, Inc

**Device Description:** PC ECG is a kind of resting and exercising electrocardiograph based on PC. PC ECG including data sampling modules and software which can be installed on desktop or laptop PC. PC ECG can acquire 12 channel waveforms simultaneously, which can also print out 3/6/12 channel electrocardiograph wave simultaneously by a 210mm (A4) wide printer.  
Advanced digital filter technique has been used in PC ECG: including baseline anti-drift filter AC noise (50/60Hz) filter; EMG Filter and Low pass Filter, which can help the user to record the ECG more clearly.

Moreover, the ECG Measurement and interpretation program(SEMIP) is included in this machine, this program can provide more detail information to diagnose heart disease.

PC ECG has the features as follows:

- 3/6/12-channel ECG wave display and printing simultaneously
- ECG wave frozen and review
- Measurement point adjustment and re-analyzing, manual measurement with high precision electronic ruler
- data management and processing function
- Report printing with PDF format, word format or JPG format
- Multi-language supporting
- Supporting auto measurement and diagnosing
- Automatic baseline adjustment for optimal printing

**Intended Use:**

SE-1010 PC ECG is intended to acquire ECG signals from adult and pediatric patients through body surface ECG electrodes. SE-1010 PC ECG is only intended to be used in hospitals or healthcare facilities by doctors and trained healthcare professionals. The cardiogram recorded by SE-1010 PC ECG can help users to analyze and diagnose heart disease. However the ECG with measurements and interpretive statements is offered to clinician on an advisory basis only.

**Test Summary:**

The following quality assurance measures were applied to the development of the PC ECG Electrocardiograph

- Software testing
- Risk analysis
- Safety testing
- Environment test

**Conclusion:**

Verification and validation testing was done on PC ECG. This premarket notification submission demonstrates that PC ECG is substantially equivalent to the predicate device.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Room - WO66-G609  
Silver Spring, MD 20993-0002

Edan Instruments, Inc.  
c/o Ms. Yue Qiuhong  
Registrar  
3/F - B, Nanshan Medical  
Equipments Park, Nanhai Rd 1019#  
Shekou, Nanshan Shenzhen, 518067  
P.R. China

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Re: K102854  
Trade/Device Name: PC ECG Model SE-1010  
Regulation Number: 21 CFR 870.2340  
Regulation Name: Electrocardiograph  
Regulatory Class: Class II (two)  
Product Code: DPS  
Dated: October 28, 2010  
Received: November 8, 2010

Dear Ms. Qiuhong:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

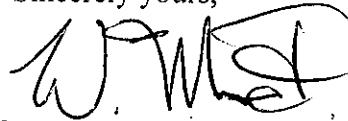
If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to <http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucml115809.htm> for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,

  
for Bram D. Zuckerman, M.D.

Director  
Division of Cardiovascular Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

**Indication for Use**

510(k) Number (if known): K102854

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Device Name: PC ECG

SE-1010 PC ECG is a PC-based diagnostic tool intended to acquire, process and store ECG signals from adult and pediatric patients undergoing stress exercise test or resting test. SE-1010 PC ECG is intended to be used only in hospitals and healthcare facilities by doctors and trained healthcare professionals. The cardiogram recorded by SE-1010 PC ECG can help users to analyze and diagnose heart disease. However the ECG with measurements and interpretive statements is offered to clinicians on an advisory basis only.

Prescription Use   X  

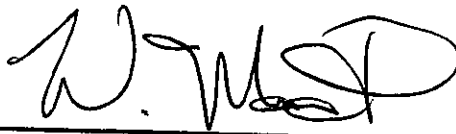
Or

Over the Counter Use       

(21 CFR Part 801 Subpart D)

(21 CFR Part 801 Subpart C)

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Concurrence of CDRH, Office of In Vitro Diagnostic Device Evaluation and Safety (OIVD)

(Division Sign-Off)

Division of Cardiovascular Devices

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